

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 2-10 are pending in the application, with claims 2, 5, and 7-10 being the independent claims. Claims 2-8 and 10 are allowed. Claim 9 is amended herein to correct minor informalities. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 112

Claim 9 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner requests appropriate correction because it is unclear according to the Examiner whether the term “minimum threshold value” recited on lines 8 and 13 of the claim is the same or different than the term “minimum threshold voltage” recited on line 2 of the claim.

Claim 9 is amended herein. As amended, claim 9 is believed to overcome the above rejection by the Examiner. Reconsideration and withdrawal of the rejection of claim 9 under 35 U.S.C. § 112 is respectfully requested.

Rejections under 35 U.S.C. § 103

Claim 9 is rejected under 35 U.S.C. § 103(a) as allegedly being anticipated by U.S. Patent Application Publication 2002/0014413 to Zarubinsky *et al.* (“Zarubinsky”) in view of U.S. Patent 6,242,975 to Eidson *et al.* (“Eidson”).

In rejecting claim 9, the Examiner alleges that Zarubinsky discloses a method that includes “setting the gain of an automatic gain control, increasing the gain of the automatic gain control stage by a predetermined amount, and repeating these steps until the signal levels of the in-phase and quadrature phase components are greater than or equal to the predetermined minimum threshold value.” *See*, Office Action, pages 2-3. In particular, the Examiner refers to paragraphs [0028], [0030], [0031], and [0089]-[0092] of Zarubinsky.

Applicants carefully examined Zarubinsky but found no reference to the alleged teachings by the Examiner. In particular, paragraphs [0028]-[0031] of Zarubinsky disclose using a gain controller 200 to control the gain of an amplifier 205 placed in front of the quadrature channel 292 of a radio circuit 299, to ensure that the in-phase and quadrature channels of radio circuit 299 have substantially equal gains. However, paragraphs [0028]-[0031] of Zarubinsky do not teach or suggest incrementally increasing the gain of the automatic gain controller by a predetermined amount until the signal levels of the in-phase and quadrature phase components are greater than or equal to the minimum threshold value, as recited in claim 9.

Paragraphs [0089]-[0092] of Zarubinsky, which the Examiner also refers to in rejecting claim 9, describe how to calculate a gain control signal W that is provided to amplifier 205. The same paragraphs also disclose that the gain control signal W

affects a gain L of amplifier 205, such that the gain L is increased or decreased when a difference exists between the gains of the in-phase and quadrature channels. However, paragraphs [0089]-[0092] of Zarubinsky do not teach or suggest incrementally increasing the gain of the automatic gain controller by a predetermined amount until the signal levels of the in-phase and quadrature phase components are greater than or equal to the minimum threshold voltage, as recited in claim 9.

Accordingly, Zarubinsky does not teach or suggest at least the above described features of claim 9. Eidson does not overcome the deficiencies of Zarubinsky as described above.

Further, in rejecting claim 9, the Examiner concedes that Zarubinsky does not teach or suggest “setting the gain to a value at which the signal levels of the in phase and quadrature phase components are less than or equal to the maximum threshold voltage, and comparing the signal levels of the in-phase and quadrature phase components to a predetermined minimum threshold value.” *See*, Office Action, page 3. However, the Examiner claims that these features are taught in Eidson. For the reasons set forth below, Applicants respectfully disagree with the Examiner.

Eidson is directed to methods and systems for amplifying a non-constant envelope signal. *See*, Eidson, claims 1 and 9. In particular, Eidson teaches limiting a signal’s envelope before power amplification in order to reduce the dynamic range of the signal, thereby enhancing amplification efficiency and reducing distortion. *See*, Eidson, col. 2, lines 8-20. However, it is apparent based on the teachings of Eidson that Eidson is only concerned with limiting **the envelope** of the signal, **not its constituent components** (i.e., I and Q components). *See*, Eidson, Abstract

(indicating that the envelope signal is compared to a maximum and a minimum value, and then scaled to ensure that it lies between these values). On the other hand, claim 9 is directed to “[a] method for setting **signal levels of in-phase and quadrature phase components . . .** between a minimum threshold voltage and a maximum threshold voltage . . .” Therefore, Eidson does not teach or suggest what the Examiner purports that it teaches, as described above.

For the reasons set forth above, Zarubinsky and Eidson, alone or in combination, do not teach each and every feature of claim 9. Claim 9 is therefore patentable over Zarubinsky and Eidson. Reconsideration and withdrawal of the rejection of claim 9 is respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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